

ABSTRACT OF THE DISCLOSURE

An optical transmission apparatus implemented as an OADM (Optical Add/Drop Multiplexer) includes quality monitors each for monitoring the quality of a signal arriving on a particular optical transmission path. A monitor/control unit converts quality signals output from the quality monitors to path-by-path bit error rates, or estimation values, and compares them to select a route. The monitor/control unit then generates a metric value "1" for the route selected and adds it to one of identical metric values, which are assigned to routes to the same destination, that corresponds to the route selected. The monitor/control unit can therefore select a route closer to actual transmission path conditions. A method of determining an optimal route for optical transfer is also disclosed.